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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,614	07/28/2003	Roger Y. B. Young	03-0460	4439
24319	7590	07/13/2005	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 MILPITAS, CA 95035			LE, QUE TAN	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/628,614

Applicant(s)

YOUNG ET AL.

Examiner

Que T. Le

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 8, 9 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsuji 6,906,794.

Tsuji discloses a semiconductor wafer inspection system comprising: an image capturing device (100, a microscope with a review system) to view at least a portion of an edge of the wafer (2) and generating an image of the edge of the wafer; a database (77, 78) receiving the generated image and storing the received image for subsequent

analysis; and a computer (75) to retrieve the stored image upon instructions from a user/operator to perform image analysis to locate any defects in the edge of the wafer (column 6). Tsuji also discloses the method of operation including setting an angle of the image capturing device relative to the edge of the wafer, magnification of the device, focus of the device, brightness of an illumination source, and the rotational speed of the wafer (columns 4-7). The Tsuji' s system inherently performs the claimed method steps.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7, 10-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji 6,906,794.

With respect to claim 5, although Tsuji lacks a clear inclusion of scanning the edge of the wafer from a region interior of a top to a region exterior of a bottom of the edge, selecting a specific manner for scanning an object to be inspected or a wafer for providing a specific pattern of image to be taken by the image capturing device would have been obvious to one of ordinary skill in the art. It would have been obvious to modify Tsuji accordingly in order to provide a better image pattern to be recorded or stored or displayed, if so desired.

With respect to claims 6 and 7, although Tsuji lacks a clear inclusion of comparing the previous defect information to the after defect information to locate any

added defects and/or any repaired defects, repeatedly inspecting the same area or portion of an inspected object or wafer for ensuring a complete inspection performance would have been obvious to one of ordinary skill in the inspection art. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tsuji accordingly in order to provide a more reliable inspection performance of the system.

Regarding claims 10-15, although Tsuji discloses different scenarios during the operation of the system but lacks a clear inclusion of an inspection during fabrication of integrated circuit components on the wafer, and a plurality of inspection stations within the fabrication system, it would have been inherently included (columns 1-2), however, if not, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tsuji accordingly in order to provide a faster production line for making a semiconductor wafer.

Regarding claims 17-20, the inclusion of a second image capturing device would have been an obvious aggregation to one of ordinary skill in the art, thus, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify the proposed system of Tsuji, discussed in the discussion of claims 10-15 above, for similar reasons set forth above. The inclusion of the determination of any added defects and/or repaired defects would have been obvious for similar reasons set forth in the discussion of claims 6 and 7 above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

I) Park 6,432,800 discloses a wafer inspection system during a fabrication process having an image capturing device and a data processing unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Que T. Le whose telephone number is (571) 272-2438.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta, can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Que T. Le

Primary Examiner